STB

Sluice and underground engineering mortar XWW4

quick-mix
A trademark of sievert

Underground engineering mortar with innovative, patented SECON® bonding agent concept and very high resistance to biogenic sulphuric acid corrosion and sulphate attack

Standard masonry mortar M25 acc. EN 998-2
NM IIIa according to DIN 20000-412

- according to test report from the IAB – Institute for Applied Building Research in Weimar, corresponds to the very high requirements of exposure class XWW4 according to DIN 19573
- WW masonry mortar according to DIN 19573
- very high chemical resistance to aggressive wastewater, particularly sulphates
- very high adhesive shear strength when combined with sewer bricks (> 0.5 N/mm² according to DIN EN 1052-3)
- high lime bonding capacity prevents elutriation
- frost-resistant
- good watertightness

sievert green line

APPLICATIONS

- for new builds and the renovation of drain, sewer and manhole structures
- for brick laying
- for repairing flaws

PROPERTIES

- very high resistance to biogenic sulphuric acid corrosion and sulphate attack
- high impermeability of the joint due to particularly favourable grain gradation of the aggregate and high adhesion to the stone
- suitable for carrying out the smooth jointing
- weather and frost resistant after hardening
- high stability due to special supporting grain
- good water retention capacity of the fresh mortar
- Mortar residue does not break off

COMPOSITION

- high-quality binders according to DIN EN 197-1
- graded stone aggregates in accordance with DIN 13139

SUBSTRATE

Properties/tests	■ The subsurface must be dry, load-bearing, clean, frost-free and suitable for the application of mortar.
Pretreatment	■ Masonry units must be dry, absorbent, frost-free and free of any residues that inhibit bonding.

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PROCESSING

Temperature	■ Do not process or allow to dry out at air, material or substrate temperatures below +5°C, or if there is a risk of exposure to night frost, or at temperatures above +30°C, or in direct sunlight, or on heated up surfaces, and/or in windy conditions.
Mixing / Preparation / Processing	■ When machine-processing: Adjust the amount of water accordingly to obtain a workable consistency. ■ Using a flow mixer, gravity mixer or compulsory mixer, mix the dry mortar with clean water for no longer than 2 to 3 minutes to achieve the correct consistency. ■ When mixing manually, first place the quantity of water specified in the technical data in a clean container and then sprinkle in dry mortar. Use clean tap water. ■ Mix material homogeneously and without lumps with a suitable agitator and adjust to consistency suitable for processing. ■ Do not mix with other products and/or other substances.
Applying	■ Apply the desired layer thickness of mortar to the masonry using a trowel. Set the masonry units in place and scrape off any protruding mortar. Ensure full and flush-jointing of the units. All mortar pockets must be filled. ■ All horizontal and vertical joints are to be filled with mortar in a full and void-free manner.
Processing / Working time	■ approx. 90 minutes ■ Mortar that has already started to harden must never be thinned down with additional water, remixed or applied. ■ The stated times apply for a temperature of +20°C and relative humidity of 65%.
Drying / Hardening	■ Low temperatures lead to delayed strength development. ■ After completion or interruption of the work, the masonry must be protected from driving rain and moisture by taking suitable measures, such as covering the copings.
Cleaning the tools	■ Clean all tools and equipment with water immediately after use.

PACKAGING

- 25 kg/sack
- loose in silo

STORAGE

- Store sacks appropriately and in dry conditions on pallets.

QUANTITY REQUIRED / YIELD

- consumption: approx. 45 kg/m² with NF K and RF K drain clinker
- yield: app. 15 l fresh mortar per 25 kg/sack
- yield: app. 600 l fresh mortar per t

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TECHNICAL DATA

Product type	Standard masonry mortar
Compressive strength class	M25 according to DIN EN 998-2
Mortar group	NM IIIa according to DIN 20000-412
Exposure classes	XWW1 – XWW4 according to DIN 19573
Sulphate resistance	≤ 0.2 mm/m
Grain	0 – 4 mm
Water requirement	approx. 3.8 l per 25 kg/sack
Bond strength / Adhesive shear strength	≥ 0.50 N/mm²
Chloride content	≤ 0.1 % by weight
Fire behaviour	A1 (non-flammable) in accordance with EN 13501
Water vapour permeability μ	15/35 (table value EN 1745)
Thermal conductivity $\lambda_{10,dry,mat.}$ for P=50%	≤ 1.11 W/(mK) (tabular value EN 1745)
Thermal conductivity $\lambda_{10,dry,mat.}$ for P=90%	≤ 1.21 W/(mK) (tabular value EN 1745)
Capillary water absorption	≤ 0,20 kg/(m²h^{0,5})
Durability (frost resistance)	NPD

All data are average values that were determined under laboratory conditions according to relevant test standards and application tests. Deviations are possible under practical conditions.

SAFETY AND DISPOSAL INSTRUCTIONS

Safety	■ This product produces an alkaline reaction when it comes into contact with moisture/water. Therefore ensure that skin and eyes are protected. If it should come into contact with the skin or eyes, rinse them thoroughly with water. See a doctor immediately if it comes into contact with the eyes. ■ Follow further instructions in the safety data sheet.
GISCODE	■ ZP1 (products containing cement, low-chromate)
Disposal	■ Completely empty and recycle the packaging. ■ Dispose of the material in accordance with the official regulations. ■ Dispose of hardened product in accordance with the local regulations. Do not allow to enter the sewer system. Dispose of the hardened product in the same way as concrete waste and slurries. Waste code according to the Ordinance on the European Waste Catalogue depending on the origin: 17 01 01 (concrete) or 10 13 14 (concretewaste and concrete slurries).

GENERAL INFORMATION

This information sheet provides only general recommendations. Should you have any queries relating to a specific application, please contact our technical sales advisor or call our hotline: +49 541 601-601. All of the details given are based on our current knowledge and experience and on the assumption that the materials are professionally applied and used for their normal purpose. All of the details are non-binding and do not release users from their duty to undertake their own tests to ensure suitability for the intended application. Due to the effects of different weather, processing and construction site conditions, no guarantee can be given for the general validity of all details. We reserve the right to make changes as a result of further development of the product and applications engineering. The general rules for construction engineering, the valid standards and guidelines, and the technical working guidelines must be observed. The publication of this technical data sheet renders all previous editions of this data sheet void. Please obtain the latest information from our website.